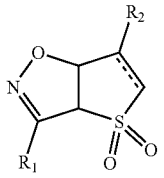
[0016] According to an aspect of some embodiments of the invention, there is provide a compound represented by Formula I*:

Formula I*



wherein:

[0017] the dashed line represents a saturated or unsaturated bond;

[0018] R_1 is an aryl or heteroaryl, which is substituted or non-substituted; and

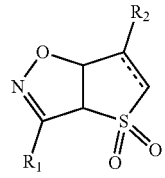
[0019] R_2 is selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heteroaryl, heteroalicyclic, halo, hydroxy, alkoxy, aryloxy, thiohydroxy, thioalkoxy, thioaryloxy, sulfinyl, sulfonyl, sulfonate, sulfate, cyano, nitro, azide, phosphonyl, phosphinyl, carbonyl, thiocarbonyl, a urea group, a thiourea group, O-carbamyl, N-carbamyl, O-thiocarbamyl, N-thiocarbamyl, C-amido, N-amido, C-carboxy, O-carboxy, sulfonamido, guanyl, guanidinyl, hydrazine, hydrazide, thiohydrazide, and amino,

[0020] wherein when R_2 is hydrogen, the dashed line represents an unsaturated bond,

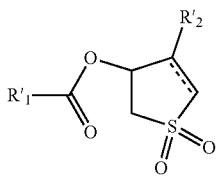
[0021] and wherein R_1 is not phenyl, 2,4,6-trimethylphenyl, 4-trifluoromethylphenyl, 4-chlorophenyl or 2,6-dichlorophenyl.

[0022] According to an aspect of some embodiments of the invention, there is provide a method of inhibiting nuclear translocation of ERK1/2 in a cell, the method comprising contacting the cell with a compound represented by Formula I or Formula II:

Formula I



Formula II



wherein:

[0023] each dashed line independently represents a saturated or unsaturated bond;

[0024] R_1 and R'_1 are each independently an aryl or heteroaryl, which is substituted or non-substituted; and

[0025] R_2 and R'_2 are each independently selected from the group consisting of hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, aryl, heteroaryl, heteroalicyclic, halo, hydroxy, alkoxy, aryloxy, thiohydroxy, thioalkoxy, thioaryloxy, sulfinyl, sulfonyl, sulfonate, sulfate, cyano, nitro, azide, phosphonyl, phosphinyl, carbonyl, thiocarbonyl, a urea group, a thiourea group, O-carbamyl, N-carbamyl, O-thiocarbamyl, N-thiocarbamyl, C-amido, N-amido, C-carboxy, O-carboxy, sulfonamido, guanyl, guanidinyl, hydrazine, hydrazide, thiohydrazide, and amino,

[0026] wherein when R_2 is hydrogen, the dashed line in Formula I represents an unsaturated bond, and when R'_2 is hydrogen, the dashed line in Formula II represents an unsaturated bond,

[0027] thereby inhibiting the nuclear translocation of ERK1/2.

[0028] According to some of any of the embodiments of the invention relating to Formulas I and II, the compound is represented by Formula I.

[0029] According to some of any of the embodiments of the invention relating to Formulas I and II, the compound is represented by Formula I.

[0030] According to some of any of the embodiments of the invention, the dashed line represents an unsaturated bond.

[0031] According to some of any of the respective embodiments of the invention, R_2 and/or R'_2 are hydrogen.

[0032] According to some of any of the respective embodiments of the invention, R_2 and/or R'_2 are each independently selected from the group consisting of hydrogen, halo and O-carboxy.

[0033] According to some of any of the respective embodiments of the invention, R_1 and/or R'_1 are each independently a substituted or non-substituted aryl or a substituted or non-substituted indolyl.

[0034] According to some of any of the respective embodiments of the invention, the indolyl is a substituted or non-substituted indol-3-yl.

[0035] According to some of any of the respective embodiments of the invention, the aryl or heteroaryl is substituted by one or more electron withdrawing groups.

[0036] According to some of any of the respective embodiments of the invention, the aryl or heteroaryl is substituted by at least two electron withdrawing groups.

[0037] According to some of any of the respective embodiments of the invention, the electron withdrawing groups are halo.

[0038] According to some of any of the respective embodiments of the invention, the halo is chloro.

[0039] According to some of any of the respective embodiments of the invention, R_1 and/or R'_1 are each independently phenyl.

[0040] According to some of any of the respective embodiments of the invention, R_1 and/or R'_1 are each independently a substituted phenyl.

[0041] According to some of any of the respective embodiments of the invention, the phenyl is substituted at a para position and/or a meta position thereof.

[0042] According to some of any of the respective embodiments of the invention, the phenyl is non-substituted at an ortho position thereof.

[0043] According to some of any of the respective embodiments of the invention, R_1 and/or R'_1 are each independently 3,4-dichlorophenyl or 3,5-dichlorophenyl.

[0044] According to some of any of the embodiments of the invention relating to a disease or disorder, the disease or disorder is a proliferative disease or disorder.